The PHENIX Trigger and Data Acquisition system

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Abstract

The PHENIX experiment at the Relativistic Heavy Ion Collider completed its first successful physics run in the summer of 2000. In its final configuration, the detector system will consist of 4 spectrometer arms with a total number of 12 detector subsystems, designed to be read out at a high rate of 1 kHz for heavy ion collisions, and 25 kHz for proton-proton collisions.

We will describe the design and function of the trigger system, the timing system, and the data acquisition and online monitoring components. The performance of the system in the past run and the upgrades planned for the year 2001 run of RHIC will be discussed.